

# ***Accomplished Teaching: A Validation of National Board Certification***

## **EXECUTIVE SUMMARY**

### **Purpose**

The purpose of the study was to investigate three important questions about the validity of the National Board for Professional Teaching Standards' (NBPTS) system for assessing and certifying accomplished teachers. These questions were:

1. Do teachers certified by NBPTS differ significantly from teacher candidates who did not earn certification in terms of the quality of their classroom teaching practices?
2. Do teachers certified by NBPTS differ significantly from teacher candidates who did not earn certification in terms of the quality of work produced by their students on classroom assignments and on external modes of student assessment?
3. Do teachers certified by NBPTS differ significantly from teacher candidates who did not earn certification in terms of their post-assessment professional activities?

### **Participants**

The study focused on a sample of 65 teachers from three geographic locations: North Carolina, Ohio and the Washington, DC area. In addition, all the teachers in the study had gone through the National Board's certification process in one of two NBPTS certificate areas: Early Adolescence/English Language Arts and Middle Childhood/Generalist. Thirty-four (34) teachers were Early Adolescence/English Language Art teachers, of whom 13 earned National Board Certification, and 21 did not. The remaining thirty-one (31) teachers were Middle Childhood/Generalists, of whom 18 earned National Board Certification and 13 did not. This sample was recruited from all eligible candidates from all years the Early Adolescence/English Language Arts and Middle Childhood/Generalist assessments were available. Of the 1,556 teachers who sought National Board Certification in these two certificate areas between 1993-94

and 1998-99, eligible study participants included only those candidates whose final scores on the NBPTS assessments met the following guidelines: (1) candidates for National Board Certification whose total scores on an assessment were at least one and one-fourth standard deviations below the certification score; (2) candidates for National Board Certification whose total scores on an assessment were between one-fourth, and three-fourths of a standard deviation below the certification score; (3) candidates for National Board Certification whose total scores on an assessment were between one-fourth, and three-fourths of a standard deviation above the certification score; and (4) candidates for National Board Certification whose total scores on an assessment were at least one and one-fourth standard deviations above the certification score. These groups were defined to ensure that dependable differences between National Board Certified Teachers and non-Board Certified teachers could be detected.

### **Design and Methodology**

The study was designed and carried out by a team of researchers at the University of North Carolina at Greensboro. Members of the research team included university educational researchers, teacher educators, assistant principals, curriculum specialists, and highly experienced practicing and retired English Language Arts and elementary and middle school generalist teachers.

The study was based on a comprehensive review of the vast research and scholarly literature on expert/novice comparisons, comparative teaching practices, and studies of schooling effects and outcomes. From the analysis of this literature emerged the 15 dimensions on which the two groups of teachers were compared. Thirteen (13) of these dimensions were related to the skills and abilities of excellent teachers; two of the dimensions were related to student learning,

and a final attribute was a complex combination of both student outcomes and teacher characteristics.

The evidence analyzed in the study was obtained from a variety of sources: teachers' instructional objectives and lesson plans for a particular instructional unit; classroom observations of all 65 teachers' classrooms; and scripted interviews of the teachers and their students. All of this information was obtained and evaluated by observers and assessors who had no knowledge of the teachers' certification status. The information gathered for each teacher was compiled into a "casebook", which served as the basis for evaluating teachers along the 13 teaching dimensions related to the skills and abilities of excellent teachers. In addition, evidence about student learning was obtained from two sources: (1) products and artifacts of the observed unit of instruction created by a randomly selected sample of students, and (2) student writing samples created in response to prompts developed by the research team. Measures of student motivation and self-efficacy were also obtained. Finally, evidence about the extent to which National Board Certified Teachers and their non-Board Certified counterparts engage in a variety of professional activities outside of the classroom was obtained via a series of structured telephone interviews.

To assess the degree to which the teachers in the sample possessed the attributes characteristic of expert teachers that emerged from the literature review, a rigorous, highly articulated assessment protocol was developed and applied to each casebook. The protocol was developed, tested, and refined by senior members of the research team and experienced teachers with over 50 years of combined experience in teacher assessment and evaluation. Trained assessors, all recently retired or practicing teachers in the relevant discipline, scored each casebook. All assessors were unaware of the certification status of the teachers in the study.

## **Findings and Conclusions**

In every comparison between NBCTs and non-NBCTs on the dimensions of teaching excellence, NBCTs obtained higher mean scores. In 11 of the 13 comparisons, the differences were highly statistically significant. In eight of the comparisons, differences between the two groups held up against what is generally regarded as the most stringent statistical test available. The conclusion seems clear: the National Board Certified Teachers in this sample possess, to a considerably greater degree than non-certified teachers, those characteristics of expert teaching that have emerged from the body of research on teaching and learning. Specifically, they possess pedagogical content knowledge that is more flexibly and innovatively employed in instruction; they are more able to improvise and to alter instruction in response to contextual features of the classroom situation; they understand at a deeper level the reasons for individual student success and failure on any given academic task; their understanding of students is such that they are more able to provide developmentally appropriate learning tasks that engage, challenge, and even intrigue students, but neither bore nor overwhelm them; they are more able to anticipate and plan for difficulties students are likely to encounter with new concepts; they can more easily improvise when things do not run smoothly; they are more able to generate accurate hypotheses about the causes of student success and failure; and they bring a distinct passion (i.e., deep commitment to their students' academic success) to their work.

On two of the thirteen dimensions (Monitoring Students & Providing Feedback and Responding to the Multidimensional Complexity of Classrooms) NBCTs obtained higher mean scores than non-NBCTs, but the differences did not reach conventional levels of statistical significance. Because of design and scorer training improvements made during the course of this

research, the authors of this report are reasonably convinced that these two differences also will be found to be statistically significant in future studies.

To investigate the differential effects, if any, that NBCTs have on student learning, the research team selected two different student outcome measures: a student product in response to an instructional assignment by the teacher tied to the instructional unit we observed, and (2) an “external” measure of writing in response to an age appropriate prompt devised by lead teachers on the scoring and observational teams. Trained assessors evaluated the responses of students to the instructional assignment using an elaborated scoring classification scheme designed to assess a student’s depth of understanding. As before, assessors were unaware of the certification status of the teachers in the study.

The evaluation of the student responses to teacher assignments provided evidence that is both compelling and consistent: the National Board for Professional Teaching Standards, through its series of comprehensive performance assessments of teaching proficiency, is identifying and certifying teachers who are producing students who differ in profound and important ways from those taught by less proficient teachers. These students appear to exhibit an understanding of the concepts targeted in instruction that is more integrated, more coherent, and at a higher level of abstraction than understandings achieved by other students.

The evaluation of the responses to writing prompts designed by the teachers on the research team as “external” indicants of achievement not directly tied to the teacher’s specific instructional objectives at the time of observation provided evidence that was less compelling. The decision to use writing as one of the measures of student outcomes was motivated by a desire to gauge the effects teachers have on a universally valued student outcome that is common to virtually all school curricula. In comparisons of the student writing scores, only students of

National Board Certified Middle Childhood/Generalist teachers obtained writing scores with statistical significance above that of non-Board Certified teachers. Differences between the writing scores of the full complement of students, as well as students of English Language Arts teachers, while in the expected direction, were not statistically significant.

Evidence of the effects that National Board Certified Teachers have on measures of student motivation and self-efficacy were inconclusive, in part, we speculate, because such effects are inherently more elusive and measures of these effects are less sophisticated.

Consistent and reliable differences in the number and variety of professional activities the teachers in the sample engaged in were not discernible. In addition, the separate sample of 40 National Board Certified Teachers interviewed to determine how schools, school districts, and other entities were using their talents indicated that, with rare exception, they have not noticed an increase in the use of their expertise since obtaining National Board Certification. It is hoped that with the increasing numbers and visibility of National Board Certified Teachers in all certificate areas, this pattern will change.

Finally, it should be noted that a limitation of the present investigation is the absence of adequate and appropriate measures of entering student ability. Attempts to match students with standardized test scores from state records were largely unsuccessful. Although we have no compelling reason to believe that students differed systematically at the beginning of the observational year, future research in this area should consider the collection of such information as part of the study design.